

PETITION FEE Under 37 CFR 1.17(f), (g) & (h) TRANSMITTAL

(Fees are subject to annual revision)

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Application Number	09/444,359
Filing Date	November 18, 1999
First Named Inventor	Gillespie, Donald E.
Art Unit	2684
Examiner Name	Tu X Nguyen
Attorney Docket Number	020366-067400US

(g), or (h)). Payment of \$\(\frac{200}{200}\) is enclose	that requires a processing fee (37 GFR 1.17(f)
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§ 1.378(e) - for reconsideration of decision on petition refusing to accept	delayed payment of maintenance fee in an expired patent.
§ 1.741(b) - to accord a filing date to an application under § 1.740 for extended	
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§ 1.12 - for access to an assignment record.	
§ 1.14 - for access to an application.	,
§ 1.47 - for filing by other than all the inventors or a person not the invent	or.
§ 1.59 - for expungement of information.	
§ 1.103(a) - to suspend action in an application.	and of coefficient 4.436(a) are not qualishing
§ 1.136(b) - for review of a request for extension of time when the provisi	
§ 1.295 - for review of refusal to publish a statutory invention registration. § 1.296 - to withdraw a request for publication of a statutory invention regist	
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§ 1.138(c) - to expressly abandon an application to avoid publication. § 1.313 - to withdraw an application from issue.	
§ 1.314 - to defer issuance of a patent.	
3 1.314 - 10 dated 155 dates of a partition	
	November 21, 2005
Signature	Date
Irvin E. Branch	42,358
Typed or printed name	Registration No., if applicable

"Express Mail" Label No. EV326936225US Deposit Maryalles

Docket No.: 020366-067400US

Tu X Nguyen

2684

PETITION UNDER 37 CFR §1.47(a)

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Alexandra, V

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

Examiner:

Art Unit:

In re application of:

Donald E. Gillespie, et al.

Application No.: 09/444,359

Filed: November 18, 1999

For: METHOD AND SYSTEM FOR PROVIDING LOCATION-SENSITIVE CALL MANAGEMENT SERVICES TO A MOBILE SUBSCRIBER

Commissioner for Patents P.O. Box 1450 Alexandria, VA 22313-1450

Sir:

Applicants petition to file the above-referenced application under 37 CFR §1.47(a) to make application on behalf of themselves and on behalf of the nonsigning inventors: Jafar Nabkel and Edward A. Youngs.

A Declaration of Irvin E. Branch, which includes the last known address of Inventors Jafar Nabkel and Edward A. Youngs is provided herewith in support of this Petition.

Donald E. Gillespie, et al. Application No.: 09/444,359 Page 2

The commissioner is authorized to charge the fee set forth in 37 CFR § 1.17(g) (\$200.00) to the undersigned's Deposit Account No. 20-1430. Please charge any additional fees or credit overpayment to the above deposit account.

Respectfully submitted,

Hvin E. Branch Reg. No. 42,358

TOWNSEND and TOWNSEND and CREW LLP Two Embarcadero Center, Eighth Floor San Francisco, California 94111-3834 Tel: (415) 576-0200

Fax: (415) 576-0300

IEB:arl 60627580 v1

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Aurora Lowell

PATENT Docket No.: 020366-067400US

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re application of:

Donald E. Gillespie, et al.

Application No.: 09/444,359

Filed: November 18, 1999

For: METHOD AND SYSTEM FOR PROVIDING LOCATION-SENSITIVE CALL MANAGEMENT SERVICES TO

A MOBILE SUBSCRIBER

Examiner: Tu

Tu X Nguyen

Art Unit:

2684

DECLARATION OF IRVIN E. BRANCH IN SUPPORT OF PETITION UNDER 37

C.F.R. §1.47(a)

Commissioner for Patents P.O. Box 1450 Alexandria, VA 22313-1450

Sir:

I, Irvin E. Branch, am an attorney at Townsend and Townsend and Crew LLP ("TTC"), representing Qwest Communications International Inc. ("Qwest") in the above-referenced patent application.

I hereby declare certain facts surrounding the signing of Declarations of Prior Invention under 37 CFR §1.131 by Inventors Donald E. Gillespie, Jafar Nabkel, Harvey J. Benson, Matthew Jacobs, acting Representative of Karen Siegel-Jacobs and Edward A. Youngs.

At least the following steps have been taken to obtain Inventor Nabkel and Jacob's signatures:

Donald E. Gillespie, et al. Application No.: 09/444,359 Page 2

- On August 27, 2005 Attorney for Applicants caused to be mailed via certified mail, return receipt requested, Declarations of Prior Invention under 37 CFR §1.131 to the last known address for Inventors: Donald E. Gillespie, Jafar Nabkel, Harvey J. Benson, Matthew Jacobs, acting Representative of Karen Siegel-Jacobs, and Edward A. Youngs.
- Attorney for Applicants received envelopes marked "Not Deliverable as Addressed, Unable to Forward" for Inventors Nabkel and Youngs. Inventors Nabkel and Youngs are no longer employees of Assignee and Assignee has no other forwarding address in their personnel records. We have been unable to locate them after diligent effort. Copies of the returned envelopes are attached hereto as Exhibit A. The last known address for Inventor Nabkel is: 1630 30th Street, #603, Boulder, CO 80301. The last known address for Inventor Youngs is: 4791 Franklin Drive, Boulder, CO 80301.
- Attorney for Applicants caused to be searched the DEX Yellow Pages for listings for Inventors Nabkel and Youngs in the city of the last known address, as well as surrounding cites. Copies of the DEX Yellow Pages listings are attached hereto as Exhibit B. We were unable to locate any listings for Inventors Nabkel and Youngs.

The undersigned, being hereby warned that willful false statements and the like so made are punishable by fine or imprisonment or both, under Section 1001 of Title 18 of the United States Code, and that such willful false statements may jeopardize the validity of the patent application or any patent resulting therefrom, declare that I am authorized to execute this instrument on behalf of applicants; all statements made of my own

knowledge are true; and all statements made on information and belief are believed to be true.

Irvin E. Branch Reg. No. 42,358

TOWNSEND and TOWNSEND and CREW LLP Two Embarcadero Center, Eighth Floor San Francisco, California 94111-3834 Tel: (415) 576-0200

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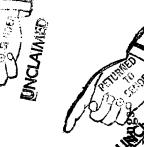
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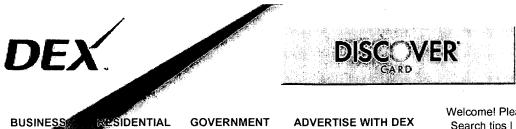
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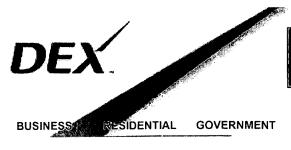
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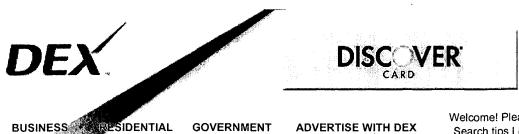
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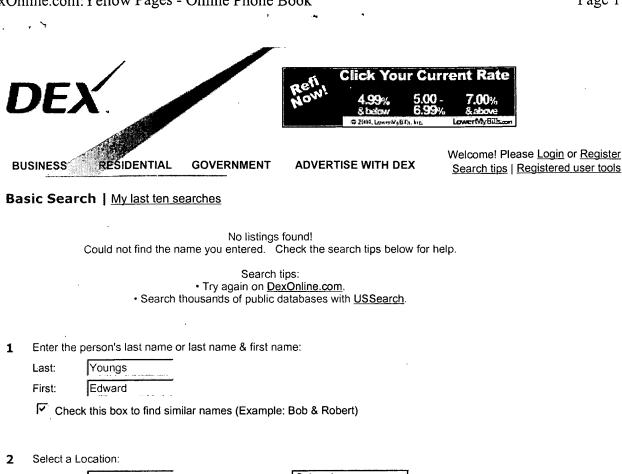
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IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re application of:

Donald E. Gillespie, et al.

Application No.: 09/444,359

Filed: November 18, 1999

For: METHOD AND SYSTEM FOR PROVIDING LOCATION-SENSITIVE CALL MANAGEMENT SERVICES TO

A MOBILE SUBSCRIBER

Examiner: Tu X Nguyen

Art Unit: 2684

DECLARATION PURSUANT TO

37 C.F.R. §1.131

Commissioner for Patents P.O. Box 1450 Alexandria, VA 22313-1450

DECLARATION PURSUANT TO 37 C.F.R. §1.131

Sir:

- I, Donald E. Gillespie, declare as follows:
- 1. I am a co-inventor of the subject matter of the referenced patent application.

Donald E. Gillespie, et al. Application No.: 09/444,359

Page 2

- 2. Prior to September 20, 1999, I participated in the conception of the subject matter of the above-described application (hereinafter "the invention"), as evidenced by Exhibits A through B. Exhibit A is an Invention Disclosure signed by all inventors and three witnesses. Exhibit B is a letter dated August 13, 1999, forwarding that disclosure to outside counsel instructing preparation of the subject patent application.
- 3. From at least a date prior to September 20, 1999, and continuing until November 18, 1999, the constructive reduction to practice of the invention, the inventors were diligent in reducing this invention to practice by, among other things, reviewing the draft patent application provided by outside counsel on October 4, 1999, as evidenced by Exhibit C.

I hereby declare that all statements made herein of my own knowledge are true and that all statements made on information and belief are believed to be true; and further that these statements were made with the knowledge that willful false statements and the like are punishable by fine or imprisonment, or both, under Section 1001 of Title 18 of the United States Code, and that such willful false statements may jeopardize the validity of the above-referenced application or a patent issued therefrom.

Respectfully submitted,

Donald F. Gillesr

60573410 v1



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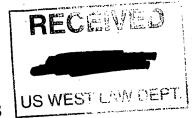
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INVENTION DISCLOSURE



DIRECTIONS

Complete EVERY ITEM. If any item is not applicable or unknown, please indicate.

All inventors should sign the form (Item 14), as well as two witnesses (Item 15) and your supervisor (Item 16).

Send the completed, ORIGINAL form to the U S WEST Law Department - Intellectual Property Group, 7800 East Orchard Road, Suite 490, Englewood, CO 80111. You may FAX the form (FAX No. 303-793-6563), but please also send the original. If you have any questions, contact the Law Department at 303-793-6276 or 303-796-6030.

Since patent rights can be lost by public disclosure, please keep your invention confidential until advised otherwise by the Law Department.

(1) Invention Title. Give a short (10 words of less) descriptive title of the invention.

A location-sensitive method and system for providing call management services to a mobile subscriber.

(2) Invention Summary. State what you regard as the key invention concept (30 words of less).

Mobile phone subscribers could be provided with call management services that are sensitive to their current geographic location; e.g., a Do Not Disturb feature that is automatically activated when subscribers are near their residence.

(3) Purpose and Problems Solved. Briefly state why the invention was developed, what problems it solves and the advantages it has over existing products or processes.

With the emerging PCS networks, mobile phone subscribers are more "in touch". One Number Services allow subscribers to be reached wherever they physically are. At the same time, mobile handsets can be used for both personal and work purposes. This continuous

communications, however, may result in too may calls to some subscribers and an encroachment on the subscribers' personal or work life. \hbar

This invention describes a method and system to provide call management services that operate based on the location of the subscriber's mobile handset. Call Management services include, for example, Do Not Disturb, call screening, caller identification, special billing arrangements, or call forwarding types of services.

(4) Description. Describe the invention and/or attach a description, drawing(s), flow chart(s) and/or diagram(s), if available.

The following diagram shows a wireless network comprised of a wireless handset, a pair of base stations (BS), a mobile switch, and a (pair of) Wireless Service Location Registers (WSLR)TM. The WSLR is described elsewhere, but for the purposes of this invention, it is a network computer containing both Home Location Register (HLR) applications and Location Management applications. The mobile switch may consist of numerous components, including a Base Station Controller, a Mobile Switching Center, and a Visiting Location Register.

The handsets communicate with Base Stations using radio frequencies. Two common digital protocols for this radio connectivity are Code Division Multiplexed Access (CDMA) and Time Division Multiplexed Access (TDMA). The Base Stations communicate with the mobile switch using a base station protocol such as IS-634 or similar. The mobile switch communicates with the WSLR using a signaling protocol such as IS-41 or GSM MAP.

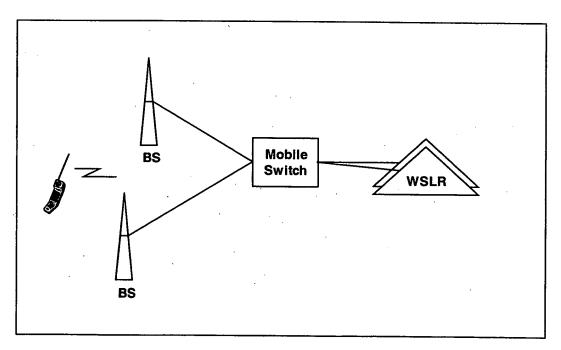


Figure 1: System for Providing Location-Sensitive Services

The method disclosed here teaches that call management services may be applied to incoming calls to the subcriber's handset or to outgoing calls from the subscriber's handset. Handset location information is either: 1) continuously furnished to the WSLR from either the network or from the subscriber's handset, or 2) provided to the WSLR upon request. This location

Page 2
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information may be devermined from a variety of techniques well described elsewhere. Two examples are triangulation of radio signals by the base stations or using Global Positioning Systems (GPS) receivers located in mobile handsets.

When incoming calls are placed to the subscriber's handset, a signal (e.g., Location Request) is sent from the mobile switch to the WSLR requesting instructions on how to route the call. The WSLR accesses internal customer profiles to determine if the subscriber's handset is presently located within a geographic region where call management services for that subscriber apply. If so, the WSLR responds to the mobile switch with call processing instructions. For example, a Do Not Disturb service may instruct the switch to present an announcement to calling party stating that the subscriber is unavailable to receive calls at the moment.

When outgoing calls are placed from the subscriber's handset, a signal (e.g., Origination Request) is sent from the mobile switch to the WSLR requesting instructions on how to route the call. The WSLR accesses internal customer profiles to determine if the subscriber's handset is presently located within a geographic region where call management services for that subscriber apply. If so, the WSLR responds to the mobile switch with call processing instructions. For example, a caller identification service may replace the handset's caller identification with the subscriber's office telephone number when the handset is in the vicinity of the subscriber's office location.

Subscribers may specify the geographic regions where call management services apply in a number of ways. Some ways are by specifying a radius from specific point, a latitude/longitude grid, a list of ZIP codes, or a list of census tracts. This specification can be accomplished several techniques, including manual specification, use of Geographic Informations Systems (GIS), or by automated entry from the handset. An example of the first technique might be supplying a list of ZIP codes to the WSLR operator. An example of the second technique might be outlining a rectangle using a map over a Web-based GIS. An example fo the third technique might be pressing a key on the handset to identify a one-kilometer radius circle from the subscribers current location.

(7)	U S WEST Project Name or 1	· No.	•
	U S WEST Advanced Techr	ologies	
(6)	Responsible U S WEST En- responsibility for the inventi- of inventors) is employed.	tity. Provide the name of the US WES on. This is usually the organization in v	ST Division/Subsidiary having which the inventor (or majority
	[] Info. Management	[] Broadband	[] Other:
	[] AIN	[X] Wireless	[] ISDN
	[] Network Operations	[] Digital Signal Processing	[] Voice Messaging
	[] Network Services	[] Multimedia/Video	[] Speech Recognition

Under what U S WEST project name or number was work done which resulted in the

Page 3
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invention?

a.

(=)

60998AC/800: Integrated Services Architecture/Technology Intelligence

- b. If the project was funded by organization(s) other than the responsible organization in Item 6 above, please name that organization(s).
- (8) Conception Date. When was the invention first conceived? Please list any records (engineering notebook, memos, etc.) which establish such conception.

The invention was first discussed on Documented in Integrated Services
Architecture subgroup meeting.

- (9) Prototype or Model. Has a prototype/model been built? If so, when was it built and where is it now?No prototype or model has been constructed yet.
- (10) Related Items. Are there any existing products, processes, patents or U S WEST invention disclosures similar or which may relate to the invention? If so, please list them.

U S WEST has a patent on Do Not Disturb, and Remote Access to Call Forwarding. The WSLR has been described in several patents including Integrated Wireline/Wireless services, Generic C architecture, and Answer/Disconnect supervision.

(11) Sale or Public Use. Has this invention been sold, offered for sale or publicly used (field trial, etc.) or is such sale or use anticipated? If so, please supply actual or anticipated dates.

The product has not been offered to the public yet.

(12) Publication or Disclosure. Has the invention been disclosed in a publication or disclosed to anyone outside U S WEST or is such disclosure or publication anticipated? If so, supply actual or anticipated dates.

No.

(13) Commercial Value. Briefly outline the potential commercial value of the invention (e.g., likelihood of use by others, licensing potential, etc.).

The commercial value to U S WEST lies with a potential commercial offering of location-sensitive services. With the patent application, U S WEST may choose to license the intellectual property to other equipment suppliers, to other network operators, or to retain exclusive marketing rights to the services.

(14) INVENTOR SIGNATUL ... \$

First Inventor (print first, MI, last)	Donald E. Gillespie		Citizenship	USA		
Relationship to USW: (please check one)	Employee ★ Contractor □	.,,,,	<u> </u>	<u> </u>		
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USW Subsidiary/Div.	U S WEST Advanced Technologies					
Work Address	4001 Discovery Drive, Suite 240, Boulder,	Colorado	80303			
Work Phone	303-541-6773					
Signature	Doubl & Jelin	Date				
	, o	- 1				
Second Inventor (print first, MI, last)	Jafar Nabkel		Citizenship	USA		
Relationship to USW: (please check one)	Employee ★ Contractor □					
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USW Subsidiary/Div.	U S WEST Advanced Technologies					
Work Address	4001 Discovery Drive, Suite 370, Boulder,	Colorado I	30303			
Work Phone	303-541-7126 Fax 303-541-8264					
Signature	Jalan Narkel Date					
	0 1			· · · · · · · · · · · · · · · · · · ·		
Third Inventor (print first, MI, last)	Harvey J. Benson		Citizenship	USA		
Relationship to USW: (please check one)	Employee ★ Contractor □	-		l		
Home Address	1065 West Mulberry Lane, Highlands Ranch, Colorado 80126					
USW Subsidiary/Div.	U S WEST Advanced Technologies					
Work Address	4001 Discovery Drive, Suite 370, Boulder, Colorado 80303					
Work Phone	303/541-6283 Fax 303-541-8264			64		
Signature	Harvey Sanson	Date				
Fourth Inventor (print first, MI, last)	Karen Siegel-Jacobs		Citizenship	USA		
Relationship to USW.				<u> </u>		

Fourth Inventor (print first, MI, last)	Karen Siegel-Jacobs		Citizenship	USA		
Relationship to USW: (please check one)	Employee * Contractor	• 🗖		1		
Home Address	4735 Harrison Ave., Boulder, Colorado 80303					
USW Subsidiary/Div.	U S WEST Advanced Technologies					
Work Address	4001 Discovery Drive, Suite 370, Boulder, Colorado 80303					
Work Phone	303-541-7157	Fax	303-541-82	64		
Signature	Kan Sua Saule	Date /	~>			

Page 5
CONFIDENTIAL - ATTORNEY/CLIENT PRIVILEGED

Fifth Inventor						
(print first, MI, last)	Edward A. Youngs		Citizenship	USA		
Relationship to USW: (please check one)	Employee ★ Contractor □		*			
Home Address	4791 Franklin Drive, Boulder, Colorado 80	301				
USW Subsidiary/Div.	U.S. WEST Advanced Technologies					
Work Address	4001 Discovery Drive, Suite 370, Boulder	, Colorado	80303			
Work Phone	303-541-7160	Fax	303-541-82	64		
Signature	221491	Date				
	H					
(attach more pages if req	uired)					
(15) WITNESS SIGNA Read and understood:	TURES	·				
Witness #1 (print name	lavid & Robinson					
Signature	Aid D. ali-	Date				
Witness #2 (print name	Lester B. Shane			•		
Signature	Luty B Shupe	Date				
(16) SUPERVISOR SIGNATURE						
Supervisor (print name	Gregory Brueniag					
Signature	14 (1)	Date				

Rhonda M. Hardesty Legal Secretary

LUSWEST

August 13, 1999

Rhonda McCoy-Pfau **Howard & Howard** 1400 North Woodward Avenue Bloomfield Hills, Michigan 48304

Re:

U S WEST Invention Disclosure for Case 1674

Patent Application Preparation

Dear Rhonda:

Enclosed is a copy of an invention disclosure and associated documents for which U.S. WEST would like Howard & Howard to prepare and file an application. The particulars are as follows:

Our Case:

1674

Title:

A LOCATION-SENSITIVE METHOD AND SYSTEM FOR PROVIDING

CALL MANAGEMENT SERVICES TO A MOBILE SUBSCRIBER

Inventor(s):

Edward A. Youngs

Donald E. Gillespie

Jafar Nabkel

Harvey J. Benson Karen Seigel-Jacobs

U S WEST Entity:

U S WEST Adv. Tech./Wireless

Deposit Acct. No.:

21-0456

U S WEST Attorney: Mark A. Thomas

Client Billing Code:

ATI-0049

Please let me know if you need anything further.

Very truly yours,

Rhonda M. Hardesty

Enclosure

HOWARD & HOWARD

E

ATTORNEYS Established 1869

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Telephone (517) 485-1483 Fax (517) 485-1568 The Creve Coeur Building Suite 200 321 Liberty Street Peoria, IL 61602-1403

Telephone (309) 672-1483 Fax (309) 672-1568

Rhonda L. McCoy-Pfau

Bloomfield Hills Office

Direct Dial: (248) 723-0434

October 4, 1999

Mr. Jafar Nabkel U.S. West Advanced Technologies 4001 Discovery Drive Boulder CO 80303

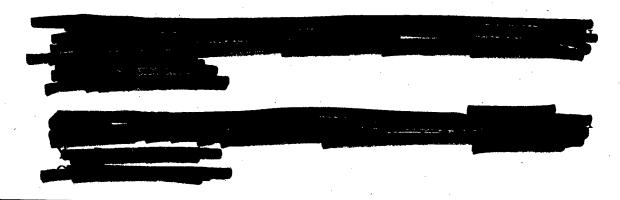
Via Overnight Mail

RE:

U.S. Patent Application for:

"METHOD AND SYSTEM FOR PROVIDING LOCATION-SENSITIVE CALL MANAGEMENT SERVICES TO A MOBILE SUBSCRIBER"

Your Ref. No.: 1674 Our Ref. No.: 60,434-002;



Dear Jafar:

I have enclosed a draft of the above-identified patent application for review by you as well as your co-inventors, including informal drawings to expedite the review process. Formal drawings will be prepared prior to filing the Application.

Please carefully review the application at your earliest convenience for accuracy and completeness. Keep in mind that we must disclose the best mode known for practicing the invention at the time of filing. Under the law, the best mode must further be disclosed in a way that would enable one of ordinary skill in the art to practice the invention without undue experimentation.

Mr. Jafar Nabkel October 4, 1999 Page 2

I look forward to hearing from you. In the meantime, should you have any questions, please do not hesitate to contact me.

Very truly yours,

HOWARD & HOWARD

Rhonda L. McCoy-Pfau
Rhonda L. McCoy-Pfau

RLM/smw Enclosures

PATENT

"Express Mail" Label No. EV326936225US

Attorney Docket No.: 020366-067400US

NOV 2 1 2005 Thereby certify that this is being deposited with the United States Postal vice "Express Mail Post Office to Address" service under 37 CFR 1.10 the date indicated above and is addressed to:

Commissioner for Patents

P.O. Box 1450

Alexandria,

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re application of:

Donald E. Gillespie, et al.

Application No.: 09/444,359

Filed: November 18, 1999

For: METHOD AND SYSTEM FOR PROVIDING LOCATION-SENSITIVE CALL MANAGEMENT SERVICES TO A MOBILE SUBSCRIBER

Examiner:

Tu X Nguyen

Art Unit:

2684

DECLARATION PURSUANT TO

37 C.F.R. §1.131

Commissioner for Patents P.O. Box 1450 Alexandria, VA 22313-1450

DECLARATION PURSUANT TO 37 C.F.R. §1.131

Sir:

I, Harvey J. Benson, declare as follows:

1. I am a co-inventor of the subject matter of the referenced patent application.

Donald E. Gillespie, et al. Application No.: 09/444,359

Page 2

- 2. Prior to September 20, 1999, I participated in the conception of the subject matter of the above-described application (hereinafter "the invention"), as evidenced by Exhibits A through B. Exhibit A is an Invention Disclosure signed by all inventors and three witnesses. Exhibit B is a letter dated August 13, 1999, forwarding that disclosure to outside counsel instructing preparation of the subject patent application.
- 3. From at least a date prior to September 20, 1999, and continuing until November 18, 1999, the constructive reduction to practice of the invention, the inventors were diligent in reducing this invention to practice by, among other things, reviewing the draft patent application provided by outside counsel on October 4, 1999, as evidenced by Exhibit C.

I hereby declare that all statements made herein of my own knowledge are true and that all statements made on information and belief are believed to be true; and further that these statements were made with the knowledge that willful false statements and the like are punishable by fine or imprisonment, or both, under Section 1001 of Title 18 of the United States Code, and that such willful false statements may jeopardize the validity of the above-referenced application or a patent issued therefrom.

Respectfully submitted,

Harvev J. Berlson

60573412 v1



NOTE: This form, and other information on patents, is available on The USWEST Law Department home page at http://www.uswsis.uswest.com (select "Law Department", "Intellectual Property", and "Patent"). It is also available on the file server at USWEST Advanced Technologies, Inc., and in hard copy from the Law Department.

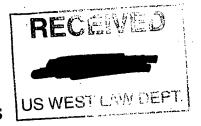
Law Department Use Only
Docket No.

Date Rec'd

USW Entity

Rec'd by (init.)

INVENTION DISCLOSURE



DIRECTIONS

Complete EVERY ITEM. If any item is not applicable or unknown, please indicate.

All inventors should sign the form (Item 14), as well as two witnesses (Item 15) and your supervisor (Item 16).

Send the completed, ORIGINAL form to the U S WEST Law Department - Intellectual Property Group, 7800 East Orchard Road, Suite 490, Englewood, CO 80111. You may FAX the form (FAX No. 303-793-6563), but please also send the original. If you have any questions, contact the Law Department at 303-793-6276 or 303-796-6030.

Since patent rights can be lost by public disclosure, please keep your invention confidential until advised otherwise by the Law Department.

(1) Invention Title. Give a short (10 words of less) descriptive title of the invention.

A location-sensitive method and system for providing call management services to a mobile subscriber.

(2) Invention Summary. State what you regard as the key invention concept (30 words of less).

Mobile phone subscribers could be provided with call management services that are sensitive to their current geographic location; e.g., a Do Not Disturb feature that is automatically activated when subscribers are near their residence.

(3) Purpose and Problems Solved. Briefly state why the invention was developed, what problems it solves and the advantages it has over existing products or processes.

With the emerging PCS networks, mobile phone subscribers are more "in touch". One Number Services allow subscribers to be reached wherever they physically are. At the same time, mobile handsets can be used for both personal and work purposes. This continuous

communications, however, may result in too may calls to some subscribers and an encroachment on the subscribers' personal or work life. \hbar

This invention describes a method and system to provide call management services that operate based on the location of the subscriber's mobile handset. Call Management services include, for example, Do Not Disturb, call screening, caller identification, special billing arrangements, or call forwarding types of services.

(4) Description. Describe the invention and/or attach a description, drawing(s), flow chart(s) and/or diagram(s), if available.

The following diagram shows a wireless network comprised of a wireless handset, a pair of base stations (BS), a mobile switch, and a (pair of) Wireless Service Location Registers (WSLR)TM. The WSLR is described elsewhere, but for the purposes of this invention, it is a network computer containing both Home Location Register (HLR) applications and Location Management applications. The mobile switch may consist of numerous components, including a Base Station Controller, a Mobile Switching Center, and a Visiting Location Register.

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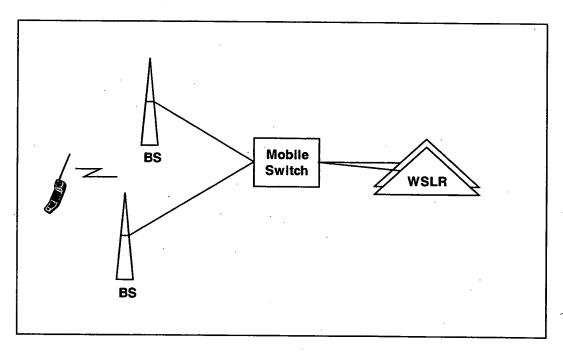


Figure 1: System for Providing Location-Sensitive Services

The method disclosed here teaches that call management services may be applied to incoming calls to the subcriber's handset or to outgoing calls from the subscriber's handset. Handset location information is either: 1) continuously furnished to the WSLR from either the network or from the subscriber's handset, or 2) provided to the WSLR upon request. This location Page 2

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information may be devermined from a vaniety of techniques well described elsewhere. Two examples are triangulation of radio signals by the base stations or using Global Positioning Systems (GPS) receivers located in mobile handsets.

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(5)	Business Area. Check the busin	ess area that best fits your inventio	n.
	[] Network Services	[] Multimedia/Video	[] Speech Recognition
	[] Network Operations	[] Digital Signal Processing	[] Voice Messaging
	[] AIN	[_X_] Wireless	[] ISDN
	[] Info. Management	[] Broadband	[] Other:
(6)	of inventors) is employed.	Provide the name of the USW. This is usually the organization in	EST Division/Subsidiary having which the inventor (or majority
	U S WEST Advanced Technolog	gies	
(7)	U S WEST Project Name or No.		

Under what U S WEST project name or number was work done which resulted in the

Page 3 CONFIDENTIAL - ATTORNEY/CLIENT PRIVILEGED

invention?

60998AC/800: Integrated Services Architecture/Technology Intelligence

- b. If the project was funded by organization(s) other than the responsible organization in Item 6 above, please name that organization(s).
- (8) Conception Date. When was the invention first conceived? Please list any records (engineering notebook, memos, etc.) which establish such conception.

The invention was first discussed on Architecture subgroup meeting.



Documented in Integrated Services

- (9) Prototype or Model. Has a prototype/model been built? If so, when was it built and where is it now?No prototype or model has been constructed yet.
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U S WEST has a patent on Do Not Disturb, and Remote Access to Call Forwarding. The WSLR has been described in several patents including Integrated Wireline/Wireless services, Generic C architecture, and Answer/Disconnect supervision.

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The product has not been offered to the public yet.

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No.

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The commercial value to U S WEST lies with a potential commercial offering of location-sensitive services. With the patent application, U S WEST may choose to license the intellectual property to other equipment suppliers, to other network operators, or to retain exclusive marketing rights to the services.

(14) INVENTOR SIGNATUL. S

(print first, MI, last)	Donald E. Gillespie		Citizenship	USA		
Relationship to USW:	Employee ★ Contractor □			L		
(please check one)						
Home Address	3807 Silver Plume Circle, Boulder, Colorado 80303					
USW Subsidiary/Div.	U S WEST Advanced Technologies		<u> </u>			
Work Address	4001 Discovery Drive, Suite 240, Boulder,	Colorado 8	30303			
Work Phone	303-54/-6236	Fax	303-541-67	73		
Signature	Donald & Sillin	Date				
	U					
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Relationship to USW: (please check one)	Employee ★ Contractor □					
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USW Subsidiary/Div.	U.S. WEST Advanced Technologies					
Work Address	4001 Discovery Drive, Suite 370, Boulder, Colorado 80303					
Work Phone	303-541-7126 Fax 303-541-8264					
Signature	Jalan Narkel					
	U	<u> </u>		· · · · · · · · · · · · · · · · · · ·		
Third inventor (print first, MI, last)	Harvey J. Benson		Citizenship	USA		
Relationship to USW: (please check one)	Employee ★ Contractor □					
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USW Subsidiary/Div.	U S WEST Advanced Technologies					
Work Address	4001 Discovery Drive, Suite 370, Boulder, Colorado 80303					
Work Phone	393/541-6283	Fax	303-541-826	54		
Signature	pature Date Date					
		<u></u>	1			
				•		

Fourth Inventor (print first, MI, last)	Karen Siegel-Jacobs		Citizenship	USA		
Relationship to USW: (please check one)	Employee *	Contractor 🔲				
Home Address	4735 Harrison Ave.,	1735 Harrison Ave., Boulder, Colorado 80303				
USW Subsidiary/Div.	U S WEST Advanced Technologies					
Work Address	4001 Discovery Drive, Suite 370, Boulder, Colorado 80303					
Work Phone	303-541-7157		Fax	303-541-82	64	
Signature	Kan Sua	Such	Date /	->		

Page 5
CONFIDENTIAL - ATTORNEY/CLIENT PRIVILEGED

	· ·		•			
Fifth Inventor (print first, MI, last)	Edward A. Youngs	* * *		Citizenship	USA	
Relationship to USW: _(please check one)	Employee *	Contractor				
Home Address	4791 Franklin Drive, B	oulder, Colorado 80	301			
USW Subsidiary/Div.	US WEST Advanced 1	Technologies	***			
Work Address	4001 Discovery Drive,	Suite 370, Boulder,	Colorado	80303		
Work Phone	303-541-7160		Fax	303-541-82	64	
Signature	SULA	71.	Date			
		1				
(attach more pages if re-	quired)			•		
(15) WITNESS SIGNARead and understood:	ATURES			·		
Witness #1 (print name	a) David G	Robinson				
Signature	Sil D. C	Thin	Date			
Witness #2 (print name	1) Lester 13	· Shune				
Signature	Suty 13	· Shupe	Date			
(16) SUPERVISOR SIGNATURE						
Supervisor (print name	Gregory Bruening					
Signature	Man Br	la .	Date			

U S WEST, Inc. 1801 California Street **Suite 5100** Denver, Colorado 80202 Telephone 303 672-2968 Facsimile 303 308-9456

Rhonda M. Hardesty **Legal Secretary**

August 13, 1999

Rhonda McCoy-Pfau Howard & Howard 1400 North Woodward Avenue Bloomfield Hills, Michigan 48304

Re:

U S WEST Invention Disclosure for Case 1674

Patent Application Preparation

Dear Rhonda:

Enclosed is a copy of an invention disclosure and associated documents for which U S WEST would like Howard & Howard to prepare and file an application. The particulars are as follows:

Our Case:

1674

Title:

A LOCATION-SENSITIVE METHOD AND SYSTEM FOR PROVIDING

CALL MANAGEMENT SERVICES TO A MOBILE SUBSCRIBER

Inventor(s):

Edward A. Youngs

Donald E. Gillespie

Jafar Nabkel

Harvey J. Benson

Karen Seigel-Jacobs

U S WEST Entity:

U S WEST Adv. Tech./Wireless

Deposit Acct. No.:

21-0456

US WEST Attorney: Mark A. Thomas

Client Billing Code:

ATI-0049

Please let me know if you need anything further.

Very truly yours,

Rhonda M. Hardesty

Enclosure

HOWARD & HOWARD

ATTORNEYS
Established 1869

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Telephone (517) 485-1483 Fax (517) 485-1568 The Creve Coeur Building Suite 200 321 Liberty Street Peoria, IL 61602-1403

Telephone (309) 672-1483 Fax (309) 672-1568

Rhonda L. McCoy-Pfau

Bloomfield Hills Office

Direct Dial: (248) 723-0434

October 4, 1999

Mr. Jafar Nabkel U.S. West Advanced Technologies 4001 Discovery Drive Boulder CO 80303

Via Overnight Mail

RE:

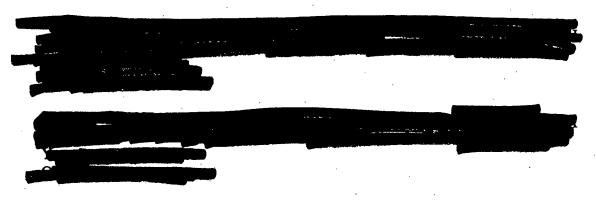
U.S. Patent Application for:

"METHOD AND SYSTEM FOR PROVIDING LOCATION-SENSITIVE CALL

MANAGEMENT SERVICES TO A MOBILE SUBSCRIBER"

Your Ref. No.: 1674

Our Ref. No.: 60,434-002;



Dear Jafar:

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Mr. Jafar Nabkel October 4, 1999 Page 2

I look forward to hearing from you. In the meantime, should you have any questions, please do not hesitate to contact me.

Very truly yours,

HOWARD & HOWARD

Rhonda L. McCoy - Pface Rhonda L. McCoy-Pface

RLM/smw Enclosures

cc: Mark A. Thomas (w/encl.) G:\M\MERITOR\\p00392\COR\Nabkel-Ltr.doc

Attorney Docket No.: 020366-067400US

I hereby certify that this is being deposited with the United States Postal Service "Express Mail Post Office to Address" service under 37 CFR 1.10 on the date indicated above and is addressed to:

Commissioner for Patents

P.O. Box 1450

Alexandria VA 22313-1450

Auroro I ovvoll

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re application of:

Donald E. Gillespie, et al.

Application No.: 09/444,359

Filed: November 18, 1999

For: METHOD AND SYSTEM FOR PROVIDING LOCATION-SENSITIVE CALL MANAGEMENT SERVICES TO

A MOBILE SUBSCRIBER

Examiner: Tu X Nguyen

Art Unit: 2684

DECLARATION PURSUANT TO

37 C.F.R. §1.131

Commissioner for Patents P.O. Box 1450 Alexandria, VA 22313-1450

DECLARATION PURSUANT TO 37 C.F.R. §1.131

Sir:

I, Matthew Jacobs, am acting as the Representative of Karen Siegel-Jacobs' Estate under 37 C.F.R. §1.42, and declare that the following is true to the best of my knowledge and/or that I know of no facts that would contradict the following:

1. Karen Siegel-Jacobs, my deceased wife, was a co-inventor of the subject matter of the referenced patent application.

Donald E. Gillespie, et al. Application No.: 09/444,359

Page 2

- 2. Prior to September 20, 1999, she participated in the conception of the subject matter of the above-described application (hereinafter "the invention"), as evidenced by Exhibits A through B. Exhibit A is an Invention Disclosure signed by all inventors and three witnesses. Exhibit B is a letter dated August 13, 1999, forwarding that disclosure to outside counsel instructing preparation of the subject patent application.
- 3. From at least a date prior to September 20, 1999, and continuing until November 18, 1999, the constructive reduction to practice of the invention, the inventors were diligent in reducing this invention to practice by, among other things, reviewing the draft patent application provided by outside counsel on October 4, 1999, as evidenced by Exhibit C.

I hereby declare that all statements made herein of my own knowledge are true and that all statements made on information and belief are believed to be true; and further that these statements were made with the knowledge that willful false statements and the like are punishable by fine or imprisonment, or both, under Section 1001 of Title 18 of the United States Code, and that such willful false statements may jeopardize the validity of the above-referenced application or a patent issued therefrom.

Respectfully submitted,

60573418 v1

Matthew Jacobs



NOTE: This form, and other information on patents, is available on The USWEST Law Department home page at http://www.uswsis.uswest.com (select "Law Department", "Intellectual Property", and "Patent"). It is also available on the file server at USWEST Advanced Technologies, Inc., and in hard copy from the Law Department.

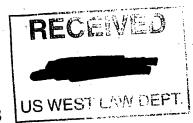
Law Department Use Only
Docket No.

Date Rec'd

USW Entity

Rec'd by (init.)

INVENTION DISCLOSURE



DIRECTIONS

Complete EVERY ITEM. If any item is not applicable or unknown, please indicate.

All inventors should sign the form (Item 14), as well as two witnesses (Item 15) and your supervisor (Item 16).

Send the completed, ORIGINAL form to the U S WEST Law Department - Intellectual Property Group, 7800 East Orchard Road, Suite 490, Englewood, CO 80111. You may FAX the form (FAX No. 303-793-6563), but please also send the original. If you have any questions, contact the Law Department at 303-793-6276 or 303-796-6030.

Since patent rights can be lost by public disclosure, please keep your invention confidential until advised otherwise by the Law Department.

(1) Invention Title. Give a short (10 words of less) descriptive title of the invention.

A location-sensitive method and system for providing call management services to a mobile subscriber.

(2) Invention Summary. State what you regard as the key invention concept (30 words of less).

Mobile phone subscribers could be provided with call management services that are sensitive to their current geographic location; e.g., a Do Not Disturb feature that is automatically activated when subscribers are near their residence.

(3) Purpose and Problems Solved. Briefly state why the invention was developed, what problems it solves and the advantages it has over existing products or processes.

With the emerging PCS networks, mobile phone subscribers are more "in touch". One Number Services allow subscribers to be reached wherever they physically are. At the same time, mobile handsets can be used for both personal and work purposes. This continuous

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communications, however, may result in too may calls to some subscribers and an encroachment on the subscribers' personal or work life. h

This invention describes a method and system to provide call management services that operate based on the location of the subscriber's mobile handset. Call Management services include, for example, Do Not Disturb, call screening, caller identification, special billing arrangements, or call forwarding types of services.

(4) Description. Describe the invention and/or attach a description, drawing(s), flow chart(s) and/or diagram(s), if available.

The following diagram shows a wireless network comprised of a wireless handset, a pair of base stations (BS), a mobile switch, and a (pair of) Wireless Service Location Registers (WSLR)TM. The WSLR is described elsewhere, but for the purposes of this invention, it is a network computer containing both Home Location Register (HLR) applications and Location Management applications. The mobile switch may consist of numerous components, including a Base Station Controller, a Mobile Switching Center, and a Visiting Location Register.

The handsets communicate with Base Stations using radio frequencies. Two common digital protocols for this radio connectivity are Code Division Multiplexed Access (CDMA) and Time Division Multiplexed Access (TDMA). The Base Stations communicate with the mobile switch using a base station protocol such as IS-634 or similar. The mobile switch communicates with the WSLR using a signaling protocol such as IS-41 or GSM MAP.

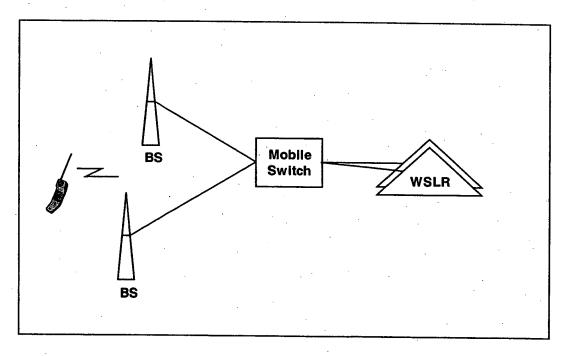


Figure 1: System for Providing Location-Sensitive Services

The method disclosed here teaches that call management services may be applied to incoming calls to the subscriber's handset or to outgoing calls from the subscriber's handset. Handset location information is either: 1) continuously furnished to the WSLR from either the network or from the subscriber's handset, or 2) provided to the WSLR upon request. This location Page 2

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information may be devermined from a vaniety of techniques well described elsewhere. Two examples are triangulation of radio signals by the base stations or using Global Positioning Systems (GPS) receivers located in mobile handsets.

When incoming calls are placed to the subscriber's handset, a signal (e.g., Location Request) is sent from the mobile switch to the WSLR requesting instructions on how to route the call. The WSLR accesses internal customer profiles to determine if the subscriber's handset is presently located within a geographic region where call management services for that subscriber apply. If so, the WSLR responds to the mobile switch with call processing instructions. For example, a Do Not Disturb service may instruct the switch to present an announcement to calling party stating that the subscriber is unavailable to receive calls at the moment.

When outgoing calls are placed from the subscriber's handset, a signal (e.g., Origination Request) is sent from the mobile switch to the WSLR requesting instructions on how to route the call. The WSLR accesses internal customer profiles to determine if the subscriber's handset is presently located within a geographic region where call management services for that subscriber apply. If so, the WSLR responds to the mobile switch with call processing instructions. For example, a caller identification service may replace the handset's caller identification with the subscriber's office telephone number when the handset is in the vicinity of the subscriber's office location.

Subscribers may specify the geographic regions where call management services apply in a number of ways. Some ways are by specifying a radius from specific point, a latitude/longitude grid, a list of ZIP codes, or a list of census tracts. This specification can be accomplished several techniques, including manual specification, use of Geographic Informations Systems (GIS), or by automated entry from the handset. An example of the first technique might be supplying a list of ZIP codes to the WSLR operator. An example of the second technique might be outlining a rectangle using a map over a Web-based GIS. An example fo the third technique might be pressing a key on the handset to identify a one-kilometer radius circle from the subscribers current location.

(5)	Business Area. Check the bus	iness area that best fits your invention.	
	Metwork Services AIN Info. Management	[] Multimedia/Video [] Digital Signal Processing [_X_] Wireless [] Broadband	Speech RecognitionVoice MessagingISDNOther:
(6)	Responsible U S WEST Entite responsibility for the invention of inventors) is employed.	y. Provide the name of the U S WES n. This is usually the organization in w	T Division/Subsidiary having which the inventor (or majority
	U S WEST Advanced Techno	logies	
(7)	U S WEST Project Name or No	0.	

Under what U S WEST project name or number was work done which resulted in the

Page 3 CONFIDENTIAL - ATTORNEY/CLIENT PRIVILEGED

invention?

a.

(5)

60998AC/800: Integrated Services Architecture/Technology Intelligence

- b. If the project was funded by organization(s) other than the responsible organization in Item 6 above, please name that organization(s).
- (8) Conception Date. When was the invention first conceived? Please list any records (engineering notebook, memos, etc.) which establish such conception.

The invention was first discussed on Documented in Integrated Services Architecture subgroup meeting.

- (9) Prototype or Model. Has a prototype/model been built? If so, when was it built and where is it now?No prototype or model has been constructed yet.
- (10) Related Items. Are there any existing products, processes, patents or U S WEST invention disclosures similar or which may relate to the invention? If so, please list them.

U S WEST has a patent on Do Not Disturb, and Remote Access to Call Forwarding. The WSLR has been described in several patents including Integrated Wireline/Wireless services, Generic C architecture, and Answer/Disconnect supervision.

(11) Sale or Public Use. Has this invention been sold, offered for sale or publicly used (field trial, etc.) or is such sale or use anticipated? If so, please supply actual or anticipated dates.

The product has not been offered to the public yet.

- (12) Publication or Disclosure. Has the invention been disclosed in a publication or disclosed to anyone outside US WEST or is such disclosure or publication anticipated? If so, supply actual or anticipated dates.
 No.
- (13) Commercial Value. Briefly outline the potential commercial value of the invention (e.g., likelihood of use by others, licensing potential, etc.).

The commercial value to U S WEST lies with a potential commercial offering of location-sensitive services. With the patent application, U S WEST may choose to license the intellectual property to other equipment suppliers, to other network operators, or to retain exclusive marketing rights to the services.

First Inventor (print first, MI, last)	Donald E. Gillespie		Citizenship	USA	
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Work Phone	303-541-6236	Fax	303-541-6773		
Signature	Doubl & Jillin	Date	303-341-07	73	
	θ				
Second Inventor (print first, MI, last)	Jafar Nabkel		Citizenship	USA	
(please check one)	Relationship to USW: Employee * Contractor (please check one)				
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		į.			
Fourth Inventor	Karen Siegel-Jacobs		Citizenship	USA	

Fourth Inventor (print first, MI, last)	Karen Siegel-Jacobs	-	Citizenship	USA
Relationship to USW: (please check one)	Employee * Contra	ctor 🔲	<u> </u>	
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Work Phone	303-541-7157	Fax	303-541-82	6.4
Signature	Kare Sua Saul	Date	303-341-82	04

Page 5
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Fifth Inventor (print first, MI, last)	Edward A. Youngs		Citizenship	USA		
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USW Subsidiary/Div.	USW Subsidiary/Div. U S WEST Advanced Technologies					
Work Address 4001 Discovery Drive, Suite 370, Boulder, Colorado 80303						
Work Phone 303-541-7160 Fax 303-541-8264						
Signature	Ell 4-90	Date				
	И					
(attach more pages if red	quired)		•			
(15) WITNESS SIGNA Read and understood:		· .				
Witness #1 (print name) Pavid G Robinson					
Signature	Jiel D. Ohi	Date				
•		·				
Witness #2 (print name	hester B. Shune					
Signature	Luty B Shupe	Date				
(16) SUPERVISOR SIG	NATURE					
Supervisor (print name	Gregory Bruening					
Signature	Man Bry	Date				

U S WEST, Inc. 1801 California Street Suite 5100 Denver, Colorado 80202 Telephone 303 672-2968 Facsimile 303 308-9456

Rhonda M. Hardesty Legal Secretary

August 13, 1999

Rhonda McCoy-Pfau Howard & Howard 1400 North Woodward Avenue Bloomfield Hills, Michigan 48304

Re:

U S WEST Invention Disclosure for Case 1674

Patent Application Preparation

Dear Rhonda:

Enclosed is a copy of an invention disclosure and associated documents for which U S WEST would like Howard & Howard to prepare and file an application. The particulars are as follows:

Our Case:

1674

Title:

A LOCATION-SENSITIVE METHOD AND SYSTEM FOR PROVIDING

CALL MANAGEMENT SERVICES TO A MOBILE SUBSCRIBER

Inventor(s):

Edward A. Youngs

Donald E. Gillespie

Jafar Nabkel

Harvey J. Benson

Karen Seigel-Jacobs

U S WEST Entity:

U S WEST Adv. Tech./Wireless

Deposit Acct. No.:

21-0456

U S WEST Attorney: Mark A. Thomas

Client Billing Code:

ATI-0049

Please let me know if you need anything further.

Very truly yours,

Rhonda M. Hardesty

Enclosure

HOWARD & HOWARD

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Established 1869

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Rhonda L. McCoy-Pfau

Bloomfield Hills Office

Direct Dial: (248) 723-0434

October 4, 1999

Mr. Jafar Nabkel U.S. West Advanced Technologies 4001 Discovery Drive Boulder CO 80303

Via Overnight Mail

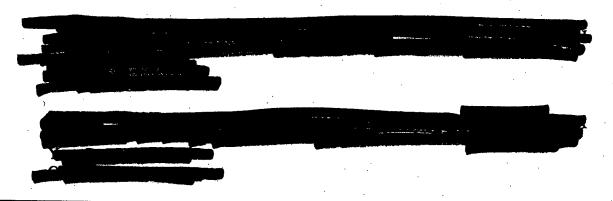
RE:

U.S. Patent Application for:

"METHOD AND SYSTEM FOR PROVIDING LOCATION-SENSITIVE CALL

MANAGEMENT SERVICES TO A MOBILE SUBSCRIBER"

Your Ref. No.: 1674 Our Ref. No.: 60,434-002;



Dear Jafar:

I have enclosed a draft of the above-identified patent application for review by you as well as your co-inventors, including informal drawings to expedite the review process. Formal drawings will be prepared prior to filing the Application.

Please carefully review the application at your earliest convenience for accuracy and completeness. Keep in mind that we must disclose the best mode known for practicing the invention at the time of filing. Under the law, the best mode must further be disclosed in a way that would enable one of ordinary skill in the art to practice the invention without undue experimentation.

Mr. Jafar Nabkel October 4, 1999 Page 2

I look forward to hearing from you. In the meantime, should you have any questions, please do not hesitate to contact me.

Very truly yours,

HOWARD & HOWARD

Rhonda L. McCoy - Fau Rhonda L. McCoy-Pfau

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cc: Mark A. Thomas (w/encl.)
G:\M\MERITOR\Ip00392\COR\Nabke!-Ltr.doc